LRAM

Research, Demonstration, and Validation at Camp Atterbury, Indiana

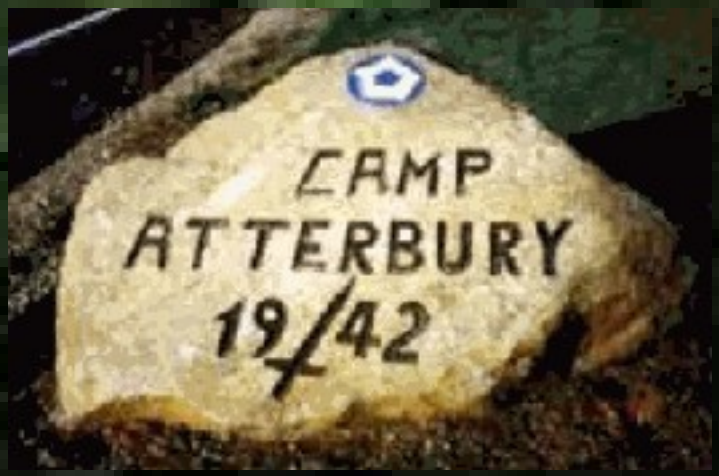
Heidi Howard

William Ochsner

LTC Barry Richmond

Camp Atterbury

- Located 35 miles south west of Indianapolis, IN
- 438,000 Training Day User soldiers last year
- Mobilization (Mobe) Site for personnel going on Active Duty Missions
- Power Support Platform (PSP)

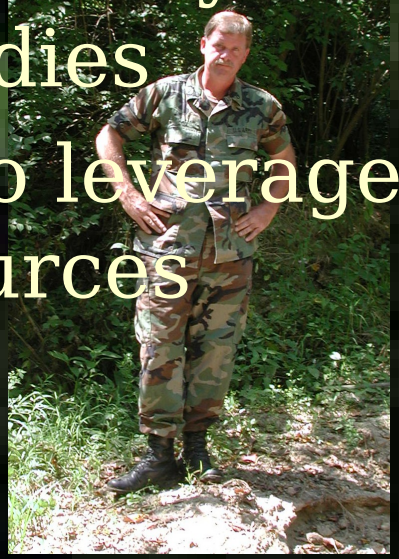


US Army Corps of Engineers Engineering Research Development Center Construction Engineering Research Laboratory (CERL)

- Located 160 miles NW of Atterbury
- Land Restoration and Management Team
  - Develop & evaluate erosion control methods/materials
  - Determine more effective / durable plant species for revegetation of military lands
  - Develop design factors for technology selection
  - Develop land based models
- Provide Land Managers with the resources needed for effective and successful land rehabilitation and maintenance

Partnership Development

- 1997- 98 CERL request acquisition of surplus Geo-Web for Fort Hood and Fort Bliss
- 1999 CERL request to use Atterbury as a pilot research site for dust studies
- 2000 – Present collaboration to leverage research and installation resources



Partnership Benefits

CERL Benefits

- Reduction in research costs for pilot and long term studies
- Close proximity to one another made an ideal site for LRAM DemVal
- Early modification of products and research as a result of user input
- Ability to test new methods and technologies
- Access to facilities i.e., equipment, troop labor

Atterbury Benefits

- Demonstration and validation at Atterbury
- Product development, user defined
- Pilot study raw data access
- Access to new technologies and methods
- Expert advice for areas of concern
- Conservation Assistance Program (CAP) availability

Collaborative Efforts

- Site Hardening
- Fugitive Dust
- Dust Palliatives Selection
- Vehicle Impacts
- Erosion Control Practices

- Vegetation Selectio
- Indiana Bat Habita
- Tactical Concealment
- Energy Conservation
- Sustainable Parking

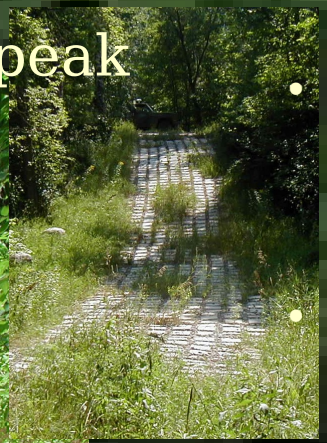
Vehicular Fugitive Dust

- Summer 2000 & 2001
  - Carried out pilot test for fugitive dust generation of Military vehicles

- Provided CERL with
  - Low cost pilot study to determine methodologies
  - Additional data set
- Provided Atterbury with
  - Fugitive dust data
  - Data for dust palliatives appropriate to their road types and vehicle usage

Site Hardening

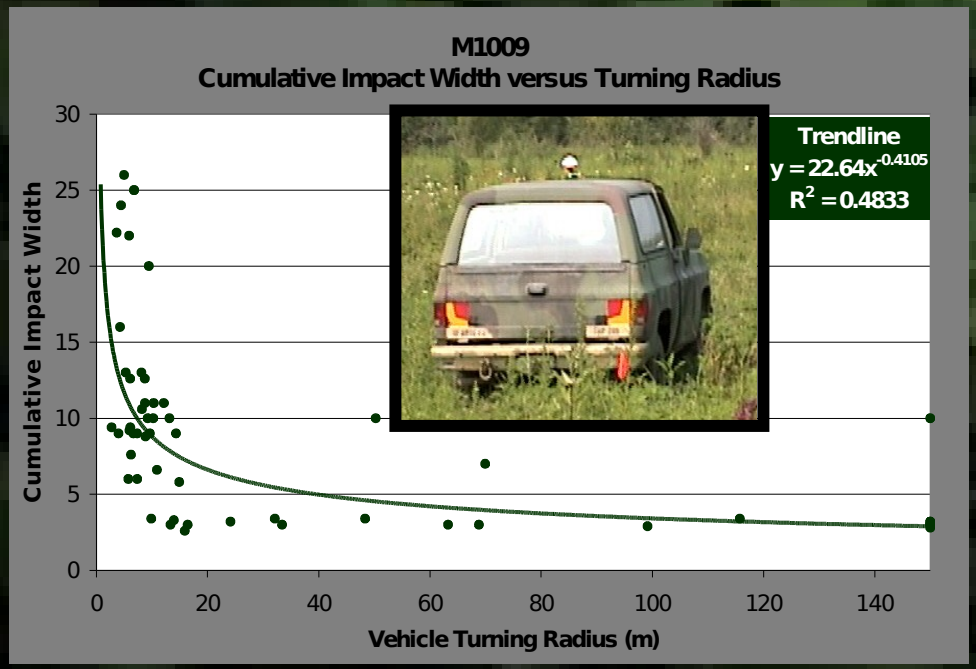
- 2001 – Present
  - Three year Project Order to evaluate effectiveness of cable-concrete on low-water crossings and trails
  - Using troop labor for site surveys and installation
  - Installation as we speak



- Provides CERL with
  - Research opportunity to assess product effectiveness
  - Demonstration of product capabilities for other installations
- Provides Atterbury with
  - Cost analysis of cable concrete
  - Design plans
  - Permit processing

Vehicle Impacts

- Summer 2001 – Present
  - Carried out vehicle impact study with Military vehicles
  - Provided CERL with
    - Low cost data set
    - Alternative vehicle data set
    - Additional climate/soil data set
    - Tagged onto dust study and hope to correlate data
  - Provided Atterbury with
    - Vehicular impact data
    - Soil and plant community data



Tactical Concealment Islands

- Designed TCI Corridor for Drop Zone
  - Provides tactical concealment from drop zone
  - Serves as a public safety screen
  - Increases wildlife habitat
  - Construction using troop and convict labor
  - Designed to allow addition of plant materials when funding available

Erosion Control Practices

- Address trail erosion
- Site assessments to provide BMP's, etc

- Provides CERL with
  - Possible research opportunities
  - Possible demonstration and validation of research products
- Provides Atterbury with
  - Free advice
  - Leveraging of funds for projects and management plans

Vegetation Selection

- 2001-2002
  - Establishment of Seed Farm
  - Selection of grass species for trafficability

- Provides CERL with
  - Possible research opportunities
  - Demonstration and validation of research products
- Provides Atterbury with
  - Free advice; appropriate species selection
  - Locally adapted seed source
  - Possible leveraging of funds for projects and management plans

Energy Conservation

- Develop plan to utilize trees and other vegetation to reduce heat during the summer and reduce wind during the winter

Sustainable Parking

- CAP funded project to determine possible products and technologies for increasing parking and reducing maintenance of parking

Indiana Bat

- Summer 2001 - Present
  - Indiana bat habitat distribution, use, and suitability
  - The Indiana bat (*Myotis sodalis*) poses a considerable conservation and compliance challenge for the US Army and DOD

- Provides CERL with
  - Cost effective research area
  - Opportunity to develop improved methods of identifying Indiana bat distribution and habitat use
  - Ability to validate proposed Indiana bat Habitat Suitability Indices

- Provides Atterbury with
  - Possible reduction in number of training restrictions
  - Regulator support / approval for less restrictive training
  - Assessing training impacts
  - Habitat model of IN Bat distribution
  - IN Bat habitat management

Team Members

Atterbury

- Range & ITAM
  - William Ochsner
  - LTC Richmond
  - MAJ Thombleson
  - LTC Shatto
- Engineering
  - MAJ Hines
  - CPT Boehmer
- Natural Resources
  - Nancy McWhorter
  - Lara Coutinho
  - Ron Moore

CERL

- LCAP Team
  - Dick Gebhart
  - Gwyn Howard
  - Heidi Howard
  - Paul Loechl
  - Tony Palazzo
  - M. Sharif
- ATTACC Team
  - Alan Anderson
  - Bill Seybold
  - Bruce MacAllister
- TES Team
  - Matt Hohmann
  - Jean Mengelkoch